What is claimed is :

1. A method for serial data communication which transmits and receives data in two-way, comprising :

transmitting data and a clock signal from a first control unit to a second control unit, at the same time checking a reception confirmation signal of the second control unit by the first control unit ; and

receiving the data and the clock signal from the second control unit by the first control unit, at the same time checking a transmission confirmation signal of the second control unit by the first control unit.

2. The method according to claim 1, wherein said data transmission process further includes the steps of :

(a) confirming whether data was received, starting the data transmission with a data transmission start signal, and receiving the reception confirmation signal from the second control unit ;

(b) recognizing the data reception of the second control unit, and reversing the transmission start signal in order to transmit a next data ;

(c) transmitting a transmission permission signal which permits the next data transmission to the first control unit by the second control unit ; and

(d) feedback-receiving the transmission permission signal.

3. The method according to claim 1, wherein said data reception process further includes the steps of :

(a) receiving a first data from the second control unit and feedback-

performing a signal for informing the reception ;

(b) receiving a preparation signal for informing a next data transmission from the second control unit ;

(c) transmitting the data transmission permission signal to the second control unit ; and

(d) transmitting the next data on the second control unit after feedback-receiving the data transmission permission signal.

4. The method according to claim 2, wherein the number of the transmitted data is adjusted voluntarily in accordance with communication circumstances, and is determined in accordance with data processing unit of the second control unit.

5. The method according to claim 2, wherein a transmission error occurs when the reception confirmation signal is not received.

6. The method according to claim 2, wherein a point of input time of the feedback signal which informs the data reception and processing of the other control unit is set in accordance with a processing rate of the second control unit .

7. The method according to claim 2, wherein the transmitting process of the data reception confirmation signal and the data transmission permission signal is performed more than two times.

8. An apparatus for serial data communication, comprising :

two control units for transmitting data with a data transmission start signal at a data transmission mode, performing repeatedly the data transmission process which feedback-receives a data transmission permission signal and a reception permission signal from one control unit to the other control unit and transmits the data, and transmitting repeatedly the data reception confirmation signal and the data transmission permission signal from one control unit to the other control unit ;

four serial buses for performing serial data transmission between the two control units ;

two pull-up operation units for maintaining control voltage level of the serial buses at a certain level ; and

a control voltage matching unit for continuing voltage equilibrium condition by muting excessive voltage at grounding side when the control voltage level do not coincide with the serial bus due to an operation voltage difference of the pull-up operation units.